

## **REMARKS / ARGUMENTS**

### **Status of Claims**

Claims 1-27 are pending in the application and stand rejected. Of the pending claims, Applicant herein provides clarifying remarks, for consideration by the Examiner, to traverse the rejections. No claim amendments have been made, and therefore under 37 CFR 1.121, no claim listing is provided herewith.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

### **Rejections Under 35 U.S.C. §102(b)**

Claims 1-27 stand rejected under 35 U.S.C. §102(b) as being anticipated by Mori et al. (U.S. Patent No. 4,868,747, hereinafter Mori). Applicant traverses this rejection for the following reasons.

Mori discloses a method and system for performing dynamic scans of objects undergoing cyclic displacement. Characteristic curves are generated from images reconstructed from projection data synchronized with the cyclic displacement of the object. A phase generator 51 receives displacement signals from electrocardiograph 13 of Fig. 1A and provides them to data coupler 52 for storage on disk 19. The phase  $\phi$  is ***triggered from the top of the EKG R wave*** because it is the most distinguishable signal from the electrocardiograph. Projection data from X-ray detector 12 of the scanning means is also sent to data coupler 52 and stored on disk 19 at the same time as the phase information from phase generator 51. (Abstract, and col. 4, lines 7-15) (Emphasis added). Here, Mori discloses the top of the EKG R wave being used to trigger the phase  $\phi$  because it is the most distinguishable signal from the electrocardiograph. Notably absent from Mori is any disclosure of an exposure marker-in signal or an R marker-in signal that overlays EKG waveform data.

Applicant respectfully submits that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements “arranged as in the claim.” *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

In comparing Mori with the instant invention, Applicant respectfully submits that independent Claims 1, 13, 23, 24, and 25, include the element of an *exposure marker-in signal at an electrocardiogram device* such that *the exposure marker-in signal is associated with the EKG waveform data*. Applicant finds no disclosure of this element in Mori.

The Examiner alleges that Mori discloses “communicating an exposure marker-in signal, *believed to be a trigger* to commence phase sequence imaging, which would expose the detector to X-rays for image acquire (col. 4, lines 10-15)”. (Paper 7, page 2) (Emphasis added). Contrary to the claimed *exposure marker-in signal*, Applicant finds Mori as referenced to disclose a phase  $\phi$  that is *triggered from the top of the EKG R wave* because it is the most distinguishable signal from the electrocardiograph. (col. 4, lines 10-15). In referring to the top of the EKG R wave being used as a trigger, Mori may disclose an R wave trigger, but is silent any disclosure of an exposure marker-in signal, as claimed.

At paragraph [0025] and Figure 4, Applicant describes and illustrates an exposure marker-in signal 228 to be a marker 228 overlayed in the EKG waveform data signal 200 to indicate the start of a CT scan exposure.

At paragraph [0023] and Figure 4, Applicant describes and illustrates an R marker-in signal 226 to be a marker 226 overlayed in the EKG waveform data signal 200 to indicate the occurrence of an R peak event 210.

At paragraph [0026], Applicant describes how the EKG waveform data 200, with the R marker-in signal 226 and the exposure marker-in signal 228 overlay, are communicated to CT imaging system 4 so as to be processed and associated with the corresponding CT imaging data.

Applicant submits that the EKG R wave trigger of Mori is more closely related to the R marker-in signal 226 of the instant invention rather than the exposure marker-in signal 228 alleged by the Examiner. However, the EKG R wave trigger of Mori is disclosed in Mori to be a trigger and not an R marker-in signal 226, and certainly not an exposure marker-in signal 228, as claimed.

Accordingly, and in respectful disagreement with the Examiner, Applicant submits that the claimed invention includes an exposure marker-in signal 228, and Mori does not. Where Mori discloses the “triggering” from the top of the EKG R wave, the instant invention claims the element of an exposure marker-in signal 228 at an electrocardiogram device such that the exposure marker-in signal 228 is associated with the EKG waveform data, which is a substantially different invention to that of Mori. Applicant finds no disclosure in Mori of an R marker-in signal or an exposure marker-in signal being overlayed on EKG data.

Dependent claims inherit all of the limitations of the respective parent claim.

Additionally, the Examiner alleges that Mori discloses “wherein marker-in signals is overlayed over the EKG waveform data, as in 3, 4, 15, and 16. (Figure 1b).” (Paper 7, page 3).

As best understood, Applicant views items 3 and 4 of Mori to be associated with Figure 1b, and items 15 and 16 of Mori to be associated with Figure 1a. With this understanding, Applicant finds Figures 1a and 1b to be absent any disclosure of an exposure marker-in signal overlayed in the EKG waveform data, and the Examiner has

not identified with specificity where in Mori such an exposure marker-in signal may be found.

In view of the foregoing remarks, Applicant respectfully submits that Mori does not disclose each and every element of the claimed invention, and discloses a substantially different invention to the claimed invention, and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of all rejections under 35 U.S.C. §102(b).

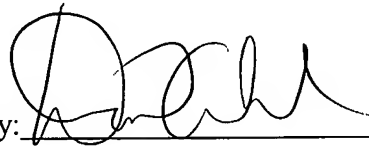
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 07-0845.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,

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